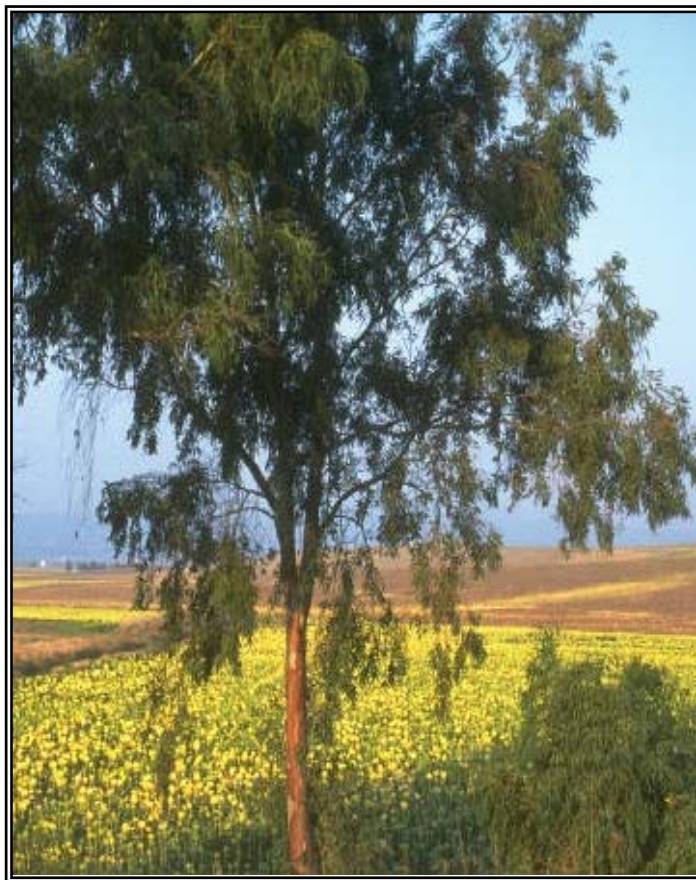


# Delaware Conservation Corridor Demonstration Project Proposal

June 19, 2003



# Executive Summary

Delaware Department of Agriculture (DDA) Secretary Michael T. Scuse responded to Congressman Gilchrest's request for proposals for the Delmarva Conservation Corridor (DCC) Project by convening a diverse group of individuals to develop a Delaware proposal. Secretary Scuse recognized that public involvement and ownership of this initiative was critical. The DCC Steering Committee chose to develop a general program outline for Delawareans to discuss and revise to meet their needs, a process that worked effectively in the recent development of the now successful Delaware Nutrient Management Program. We tasked ourselves with the mission to develop a plan that **improves the economic viability of agriculture and the environmental health of Delaware's watersheds.**

The program consists of two core components: **(1)** Establishing an agricultural operations and conservation "Advocate's Office" to improve the marketing of, and participation in, existing and new conservation programs. Another core objective of the "Advocate's Office" will be to partner with landowner/operators in full spectrum business planning, and **(2)** Developing and implementing new conservation programs designed to meet both core objectives and reworking existing programs to better fit the needs dictated by our region's unique economic and environmental needs.

The proposed "Advocate's Office" will be located in the Delaware Department of Agriculture and will be designed to meet the many and varied needs of Delaware's agricultural community. Those needs span the spectrum from conservation planning and best management practice design to estate planning and business plan development. After review of the current agricultural issues facing Delaware, it became apparent that there is a lack of knowledge about available conservation programs among the agricultural community. We believe a focused and consistent marketing strategy will solve this problem and increase conservation practice participation. In addition, there is a lack of business planning assistance for Delaware farmers. Traditional business development models do not translate well to agricultural business operations. There is an overwhelming need for complete business planning and development assistance for the Delaware agricultural community. Another task of the "Advocate's Office" will be the dissemination of seed grant funds, explained further within this proposal.

Delaware's second core initiative is the development of new conservation practices, the tweaking of established practices and implementation of strategies to prioritize and bundle conservation practices to improve efficiencies and benefits. We are proposing higher levels of funding for some existing programs such as FRPP, WRP and Forest Legacy. Presented are proposals to change existing programs such as CRP CP 23 to better fit Delaware's needs. Included as well are proposals to initiate new conservation practices for Delaware. Paramount among those is a proposal to fund a new cost share program for new "state of the art" irrigation systems.

The DCC Steering Committee believes the presented proposal is a great first step towards reaching the goals and objectives expressed within the 2002 Farm Bill.

# **Key Components**

## **Delmarva Conservation Corridor Proposal**

- ❖ Incorporates strategies to bundle conservation practices on the farm and in selected areas**
- ❖ Request approximately \$61 million federal DCC funds**
- ❖ Provides \$38.6 million in state and local match dollars**
- ❖ Provides over \$74 million in private funding**
- ❖ Presents strategies to market conservation, preservation and economic viability initiatives**
- ❖ Includes organizational structure strategies**
- ❖ Includes provisions for new irrigation systems**
- ❖ Provides for the protection of rare and unique habitats**
- ❖ Presents a framework to begin the process of evaluating and compensating producers for the environmental intangibles their land provides**
- ❖ Includes future plans for value added ventures**

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# Delaware Conservation Corridor Demonstration Project Proposal

## Introduction

Much explanation and detail has been conveyed within the introduction of this multi-jurisdictional document demonstrating the Delmarva Peninsula's significant contributions to the natural environment, our national heritage, and the agricultural infrastructure of the east coast. We do not plan to repeat all those positive attributes here. However, it is appropriate to relate some key and unique Delaware contributions and to show a snap shot of this state's relevant concerns and issues

Delaware has made unique and important contributions to both the natural ecosystem and the agricultural heritage and economy of the Delmarva Peninsula. Delawareans have a strong history of conservation. The state's "Coastal Zone Act" which protects the majority of our coast line from development, is a demonstration of that commitment. The State funded and operated Open Space Preservation Program has preserved thousands of acres of park land, forest land and unique habitats. The State's Agricultural Preservation Program has protected over 130,000 acres of prime agricultural land in Agricultural Preservation district. Of that total, 70,000 have been permanently preserved with agricultural easements through a purchase of development rights program. Delaware landowners have also demonstrated a tremendous commitment to natural resource and agricultural preservation. Landowners have signed up for CREP at much higher than expected rates. They have also paid for preservation with their tax dollars. Delaware boast the highest per capita expenditure towards farmland preservation of any other state in the nation.

However, the time to act on a more focused and committed level is now. We are currently losing both our precious natural resource and our agriculturally based way of life and economy. Fragmentation of the landscape has adversely affected both the natural system and the agricultural infrastructure system. As we all realize, large contiguous blocks of land are needed to maintain the agricultural business infrastructure of grain mills, feed stores, and equipment suppliers, which support the overall agricultural economy. In the same way natural habitats need large contiguous blocks of land to sustain their viability thus continuing to provide a nurturing environment for Delaware's native species.

Until recently, unchecked sprawling development has converted large tracts of once productive and viable agricultural land, as well as important natural resource areas. The development pressure continues to increase as the state's total population numbers continue to grow. What is more disturbing to the natural environment and the agricultural land base is the rate of land consumption per new residents continues to grow. We are converting more and more land per new resident. In response to this trend, the state has initiated "smart growth" initiatives. Governor Minner's "Livable Delaware Agenda," contains spending policies design to direct growth to established community areas. This state policy also encourages local governments to

guide growth to those same established community areas. Progress has been made, but the problem of agricultural and natural habitat fragmentation must be addressed through both preservation of still existing important areas and mitigation/restoration of key converted areas. It is our hope that the initiatives developed and implemented through the DCC will help curtail this land consumption trend. Contained within this proposal are new conservation practices designed to meet Delaware's unique needs, and expansion of existing conservation practices. However, key to the success of this effort is our proposal to implement an "Advocate's Office." At the heart of this effort is **farmer preservation**, not just farmland preservation. Conservation of natural resources and preservation of the landscapes by themselves will not meet the goals of "*improved agricultural viability and improved environmental integrity*." The economic viability of farming and the farm family must be addressed and enhanced.

## Process

Department of Agriculture Secretary Michael T. Scuse organized the members of the Delaware Conservation Corridor Steering Committee and they worked many long months to develop our proposal. The Steering Committee met every two weeks from November 2003 to May 2003. The committee was diverse in its makeup and included as many interested and appropriate stakeholder groups as possible. Members represented the Farm Bureau, FSA, NRCS, DDA, Delaware Department of Natural Resources and Environmental Control, local governments, legislative delegate offices, the Governor's office, the Nature Conservancy, Delaware Nature Society and many others. Please see the list of Steering Committee members at the end of this proposal.

Many aspects of Delaware agriculture's current situation were examined and discussed. We reviewed conservation strategies developed by other states and regions, listened to the concerns of one another and discussed new and innovative mechanisms to improve agricultural viability and improve the integrity of our watersheds.

The committee developed a draft proposal, or better said a talking points paper for public review. Four public meetings were held during the month of April, at least one in all three counties within Delaware. There were two meetings held in one of the counties. Public feedback was very useful in development of the final proposal. The committee members continued to work through the month of May developing a final proposal which considered (1) concerns expressed during the formal public process, (2) the needs of the agricultural community, and (3) the needs of the ecosystem.

It is our hope that this proposal will address those needs and concerns. We view this as an ongoing process and Steering Committee members plan to work with the DCC process through implementation. The first part of this proposal, presents our implementation strategy and delivery mechanism. It is then followed by the many proposed practices and initiatives.

## Further Efforts

In addition to the initiatives communicated within this proposal, we look forward to working with the USDA, through the DCC, to further expand and refine our efforts on many fronts. **One proposal that is not herein detailed, but we hope to explore further with USDA in the near future, is a crop insurance program tailored for Delmarva.** It is our plan to develop a crop insurance program for implementation during years 2-5 of the DCC.

The DCC Steering Committee Members, in consultation with USDA technical service providers and the other jurisdictions involved in the DCC project, will be identifying and designing implementation strategies, which reward producers who have demonstrated a strong commitment to the preservation and/or conservation of working lands. One of the ways this will be accomplished is through prioritizing payments to producers who have shown that commitment to conservation/preservation. Another conservation/preservation funding delivery strategy we hope to design, will tailor conservation practice packages (which include many different initiatives) to watersheds based on their unique ecological and economic needs. We also look forward to a continuation of the close working relationships which have been established among all jurisdictions involved in the DCC. We in Delaware view this project as a truly regional effort and we will continue to identify and forward opportunities for collaboration among the three states, local governments, non-profit organizations and the federal government.

# **The Advocates Offices**

## **Delmarva Conservation Corridor Proposal**

### **Background**

Farm Bill Titles Conservation, Rural Development, Research, Forestry, Energy and Miscellaneous contain programs designed to benefit owners and users of working lands on Delmarva. State programs offer other opportunities for those on working lands. Through the both the Steering Committee process and the formal public process it became apparent that many program are not accessed or utilized to their fullest potential. Through a lack of knowledge targeted landowner/operators are missing out on possible conservation practice funding, and as a result we all are missing out on the benefits of protecting and enhancing our natural ecosystem and farm infrastructure. Conservation practice implementation personnel are stretched to deliver the services currently under demand. Due to current demands on their time, expectations of marketing existing programs and developing new conservation practices tailored to our local are unrealistic. In addition, many times sustainable practices emerge from pragmatic, grassroots ingenuity.

Delaware's proposed program of marketing and delivery of new and existing initiatives enthusiastically embraces new ideas and concepts. Many times existing programs contain inflexible parameters. While we recognize those constraints and the reasons for them, we believe we can do better. In addition, the DCC will develop a mechanism to review, fund and implement demonstration projects that meet the principles of the DCC. We do not propose to overlap efforts or replace existing conservation practice personnel, nor do we find the current delivery system to be radically flawed. We received no complaints about USDA personnel or their abilities. What we propose is to augment the current system with specialized personnel tasked specifically with shepherding conservation practice clients to appropriate program personnel and if necessary, stay with the client through the entire practice design and implementation process. In addition, the Advocate's Office personnel will assist landowner/operators with a broad spectrum of farming practice alternatives and financial planning.

### **Proposed Advocates Office Structure**

We propose that Delaware's DCC activities should be coordinated from the Delaware Department of Agriculture (DDA). We maintain that initiation of an Advocates Office (within DDA), is essential to success our effort. As stated earlier, the purpose of the Advocates Office would be too proactively and aggressively market conservation practices and then shepherd landowners through the process of initiating and implementing those conservation practices. In addition Advocate Office personnel would be responsible for assisting landowners to identify, design and implement value added ventures, financial management plans including estate planning.



Although operation of the Delaware Conservation Corridor Demonstration Project should be operated under the authority of the Delaware Department of Agriculture, a standing advisory committee (made up of the existing Steering Committee membership) should be appointed from among the agriculture and conservation communities to work closely with the Secretary in developing and monitoring programs offered through the Conservation Corridor Project. A Project Coordinator, located within the “Advocates Office” will be hired. The Coordinator will answer directly to the Secretary of DDA and work closely with the committee. **The coordinator will have office space at DDA, but have mobile capabilities.** We believe for this effort to be successful that the Coordinator will need to be extremely mobile and will log more road time than office time. Crucial to this marketing effort will be time spent with producers around the kitchen table. Depending on the number and scope of programs offered, Delmarva Conservation Corridor Project staff supervised by the coordinator may consist of 1-5 people initially. We recommended support to be drawn from the DDA Planning Section. In addition to the Coordinator position, a family and financial analyst/consultant should be retained immediately.

#### **Coordinator Responsibilities**

- Work with the committee on program development. **Specifically implementation of a conservation recipient prioritization system which rewards producers who preserve their land and/or demonstrate a strong conservation ethic**
- Nurture a collaborative relationship with USDA partners, Cooperative Extension, State agency partners, private organizations
- Supervise staff
- Direct participation in outreach and program delivery
- Coordinate activity of technical service providers (TSPs)
- Grant writing, program sustainability, identify and shepherd value added ventures

#### **The Financial Analyst/Business Consultation Service Program**

We believe an economically viable agriculture is the cornerstone to preserving working lands. The diversity of Delmarva agriculture is the key to our prosperity. What we have to do now is to develop a system that supports agricultural producers as owner/operators of a key industry. Traditional business owners need resources to assist them in managing under a multitude of unforeseeable circumstances. We desire to provide confidential and individualized assistance to **farm families** in a timely manner which also accounts for the multitude of unforeseeable circumstances. We hope to:

- Maintains strong farm families
- Supports farm family decision making
- Helps farm families in transition

**Consultation:** Free and confidential outreach consultants provide on- farm visits to help farm families answer business and personal questions about topics of concern including: Finances, Farm changes, entrepreneurship, Personal stress, Family communication and more.

**Information and Referral:** Individualized assistance based on the questions and concerns expressed by the caller

**Resource library:** Topics include but are not limited to Financial Management, Business Transfer, Farm Transitions, Legal Referral Information, Family Matters, and Employment.

## Seed Grant Funds

We request as part of the Advocates Office, funds to provide nominal seed grants to foster new agricultural or conservation practice ventures. Seed grant recipients would not receive over \$5,000 for the life of the DCC and the program coordinator would be encouraged to maintain grant award averages below \$1,000. The grant applicant would be required to show, within their application, how the funds would add innovation to the agricultural and/or environmental conservation sectors. In order to encourage innovation, few preset criteria would be instituted.

### Advocates Office

#### Delmarva Conservation Corridor

**BUDGET: Coordinator Position, Assistant Coordinator, and Financial Analyst and provision of transportation and gas.**

	<b>Federal</b>	<b>State*</b>
<b>2003</b>	<b>\$200,000</b>	
<b>2004</b>	<b>\$200,000</b>	
<b>2005</b>	<b>\$200,000</b>	
<b>2006</b>	<b>\$200,000</b>	
<b>2007</b>	<b><u>\$200,000</u></b>	
	<b>\$1,000,000</b>	

**\*State obligation: offices space, supplies, electronic equipment**

**BUDGET: Seed Grant Program**

	<b>Federal</b>
<b>2003</b>	<b>\$20,000</b>
<b>2004</b>	<b>\$20,000</b>
<b>2005</b>	<b>\$20,000</b>
<b>2006</b>	<b>\$20,000</b>
<b>2007</b>	<b><u>\$20,000</u></b>
	<b>\$100,000</b>

# Delaware Agricultural Lands Preservation Program

## Delmarva Conservation Corridor Proposal

### Executive Summary

Delaware's Agricultural Lands Preservation Foundation was awarded \$1 million in FPP funds in 1997 and an additional award of \$1.33 million in 1998, approximately \$592,000 in 2001, \$1,956,500 in 2002 and approximately \$2.1 million in 2003. We believe our use of a modified Land Evaluation and Site Assessment (LESA) scoring system to determine farmland eligibility for preservation, and our system of ranking applications for permanent preservation using a competitive bid process, along with a geographic information system (GIS) based on statewide implementation of the LESA model is the most advanced analysis of farmland preservation suitability presently utilized in the nation. Recently, the Foundation staff automated the LESA system and now has a database and graphical depiction of LESA scores for all farming parcels state-wide.

The DALPF has demonstrated a long and successful history of preserving farmland. According to our analysis, we currently lead the nation, among state operated farmland preservation programs, in the percentage of total state land area (5.63%) and are second in the nation in the percentage of land area in farms (12.58%) under permanent agricultural easement agreements. In addition, the citizens of Delaware have demonstrated a firm commitment to farmland preservation. We estimate Delaware has spent \$92.23 per person to purchase permanent agricultural easements in the First State. This is the highest per capita expenditure on farmland preservation in the nation. It is also important to note that Delaware purchases development rights on farmland at a significant discount below the appraised value of those development rights. To date our average landowner donated portion of the easement sale is over 50%. Delaware landowners have demonstrated a strong preservation mindset.

### In 2003

According to Delaware's NRCS personnel, we likely will receive approximately \$2.1 million in 2003 FPP funds. In light of this program's success, our common goals and the national significance of this area's agricultural contribution, **we request an additional approximately \$3.1 million in 2003 FPP funds** to help permanently preserve economically important and environmentally significant Delaware farmland. Delaware intends to match these federal dollars 1 for 1. All totaled, there is approximately \$11.5 million in private contributions for these same properties. This combination will result in a total easement value, purchased with Federal help, of approximately \$20.6 million.

The leveraging of federal funds, with a match rate of over 50% of the total easement cost, is a

chance to effectively use scarce dollars. It is important to remember that, due to the significant discounts achieved by this program, the value of the purchased easements is well above the cost to obtain them. This means that although the federal government would be cost sharing at a 50% rate on the direct purchase costs of the easement, the federal contribution towards the value of the easement would be approximately 20%.

The Foundation is in the enviable position of being able to immediately utilize the requested funds to permanently preserve some of this nation's most threatened and important farmland.

## For the Remainder of the DCC

It is important to remember that protection of these important agricultural lands has untold environmental benefits. In Delaware, we believe the enhancement and protection of our natural resources is irrevocably tied to the retention and viability of our working lands. We also actively strive to directly enhance the environmental integrity of those working lands through various conservation practices. As part of our LESA scoring process, we account for biodiversity value of farmland. The higher the biodiversity value of a farm parcel the higher its overall LESA score and the more likely the parcel will be determined eligible for the preservation program. In addition, we encourage the implementation of NRCS conservation plans on all farms within Delaware and particularly on preserved farms.

We are excited about the recent county participation in our state operated farmland preservation program. We received \$600,000 in local match dollars this year and anticipate significantly more in the coming years. There are also many funding strategies currently under consideration which would boost our yearly farmland preservation allocation. These facts all summed yield an anticipated yearly obligation of approximately \$8 million for farmland preservation in the First State.

**We request, (in addition to the first year \$3.6 million request) through the DCC, \$8 million per year in FRPP funds.** This four year \$8 million request added to the \$3.6 million first year request gives a **total \$35.6 million FRPP request** to be matched 1 for 1 with state and local dollars, giving a total government obligation of approximately \$71 million. In addition, at our current landowner discount rate of over 50%, this yields over **\$71 million in private contributions** towards a total easement value of approximately \$142 million.

# Delaware Agricultural Lands

# Preservation Program

## FARM and RANGELAND PROTECTION PROGRAM PROPOSAL SUMMARY for the DCC

In addition to the already tentatively awarded \$2.1M, the **DCC request \$3.6 million in 2003**

**Provides a 1 for 1 match** in State and local funding for 2003 through 2007

**50% Federal share** relative to total easement costs and approximately **25% relative to total easement value**

Averages over **50% discount by landowners** on total easement value, a significant landowner share

In 2003, could purchase easements on as many as **75 farms**

Preserves farmland through preservation **easements in perpetuity**

Utilizes a **LESA based** scoring system

Request **\$8 million federal dollars per year** for the remaining four years of the DCC project

- Total **request \$35.6 over five years**, leveraged against state, local and private dollars **captures over \$142 million in easement value**

# Delaware Agricultural Lands Preservation Program

## I POLICY

The Delaware Agricultural Lands Preservation program, established in 1991 by State statute, seeks to preserve the best agricultural land of Delaware, protect the industry of agriculture and the profession of farming. The overall program is carried out through a two-step system of Agricultural Lands Preservation Districts and the Purchasing of Development Rights.

The Agricultural Preservation District is an agreement between the State of Delaware, through the Agricultural Lands Preservation Foundation, and farmland owners not to develop the land and to keep it in agricultural, forestry and horticultural uses for at least ten years. These Districts form a "holding pattern" for land to be preserved in Delaware.

The second phase of the program consists of the purchase of development rights on farmland enrolled in Agricultural Preservation Districts, which results in the placement of permanent agricultural easements on the Agricultural Preservation Districts. Both phases of the program are voluntary.

To date, the Delaware Agricultural Lands Preservation Program has either completed or is the process of completing permanent easement agreements on 351 farms, encompassing 70,453 acres. Delaware has demonstrated a very successful record of farm preservation and leads the nation in the percentage of "total state land area" and is second in the nation in "total land area in farms" under permanent agricultural preservation agreements with 5.63% and 12.58% respectively.

## II PURCHASE OF DEVELOPMENT RIGHTS (PDR)

Owners of land in Agricultural Preservation Districts may offer to sell the development rights on their farmland and thus preserve the agricultural land in perpetuity.

**All program properties are evaluated and scored according to the Land Evaluation/Site Assessment (LESA) formula during the district application review process, which occurs prior to the development rights purchase application process.** To be eligible for the Farmland Preservation District program participation, the applicant property must achieve a minimum LESA score of 170 out of a possible 300 points. The next step is the development rights purchase program (PDR). Upon closure of the yearly PDR application cycle, the Foundation funds the efforts of an independent, certified appraiser to establish the value of the development rights on all PDR applicant farms. After review of appraisal documents, the landowner and the Foundation's legal counsel enter into negotiations on a final and possibly discounted easement purchase price.

Delaware's PDR program is extremely competitive due to a high level of interest, which always outstrips the level of available funds. **Currently, Delaware's Farmland Preservation Program is purchasing development rights on prime farmland at an average discount of over 50% of the appraised value.** The discounts vary from round to round. The discounts for Round 5 averaged 53%, yielding an average purchase price of \$913/acre and Round 6 discounts averaged 51%, yielding an average purchase price of \$895/acre. Landowner discounts for Round 7 averaged over 50%, yielding an average cost per acre of \$1,457, while Round 8 discounts average 52.9% at an average cost of \$1,170/acre.

### III STRATEGIC MAPPING

The Agricultural Lands Preservation Foundation determined that it would be useful to use the best current technology to map those lands in Delaware most suitable for agricultural preservation. For many years Delaware utilized the Land Evaluation and Site Assessment (LESA) model for evaluating agricultural suitability. In conjunction with the Soil Conservation Service, the State of Delaware developed its own LESA model some years ago. In fact, Delaware remains one of the few states to effectively implement the LESA program on a statewide basis. LESA has become recognized throughout Delaware as a valuable model in ranking alternative proposals for the development and utilization of agricultural land. For many years, Department of Agriculture staff envisioned implementing the LESA model on a state-wide mapping basis, using generalized concepts to create a colorphlethic map which would characterize relative suitability for agriculture for all land in Delaware. The Agricultural Lands Preservation Foundation developed such an Aglands Strategy Map in the course of developing regulations for the AG Preservation Program. The Strategy Map uses a six-layer Geographic Information System analysis (GIS) to create a five-color map, which lays out a ranking system for land in Delaware for AG preservation. The six layers included SOILS, SEWER DISTRICTS, AREA IN AGRICULTURE, AGRICULTURAL INVESTMENTS, NATURAL RESOURCE PROTECTION AREAS, and LAND COVER. Using GIS technology, these various factors were weighted and scored, and several scenarios were presented to the Foundation and to the public over the course of several months of discussion and public hearings. Finally, a scenario was adopted by the Foundation and the subsequent map has been adopted as the Aglands Strategy Map for Delaware. This map will in a short time be replaced by the automated LESA map currently under staff development/review.

### IV RANKING FOR PURCHASE OF DEVELOPMENT RIGHTS

While the use of the LESA system and its graphic depiction for Delaware reflected in the "Strategy Maps" is one of the primary factors which determines eligibility for farmland preservation, the ranking of PDR applications is primarily a function of the level of discount offered by the land owner. The PDR scoring is a method to break ties if discounted offers are evenly matched at the point where available funds determine a cut off point for the number of easements purchased in any given round.

**Delaware continues to depend heavily on the LESA system for a widely recognized, objective and defensible means of evaluating individual parcels for agricultural suitability and program eligibility.** As such, the LESA score for a parcel being offered for the sale of development rights counts as 20 points towards the ultimate 100 point possible PDR ranking score. The Strategy Map, which counts for 50 points out of 100, and the LESA score for the individual parcel, which can count for up to 20 points, comprise 70% of the ultimate PDR score. Both factors are ultimately based on the LESA system. The scoring system also credits the environmental and historical significance of a parcel. Please refer to Attachment B for an overview of Delaware's PDR ranking system.

## **V EASEMENT PURCHASE PRICE**

One of the many strengths of Delaware's system for acquiring development rights is the negotiation process. As stated before, all agricultural easement applicant properties are submitted to an independent, certified appraisal company for estimates of the easement value. Appraisers perform two distinct appraisals on each property. One appraisal is full market value and the second is agricultural only value. The development value is the difference between the full market value and the agricultural only value. The agricultural only value is determined by capitalizing known or estimated land rents on the subject property using a capitalization rate based on alternative investment strategies provided by the University of Delaware. Once appraisals are completed, these are presented to owners and owners are asked to make an offer to the Foundation.

Adding to the competitive strengths of the Delaware system, the Delaware General Assembly has required a 4:1 match of State to private contributions. While we do not require each individual parcel to discount a certain percentage (such a requirement would thwart IRS regulations regarding charitable donations), the Foundation does seek an overall discount rate sufficient to meet the private contribution requirement of the General Assembly. Our current landowner contribution to the total easement value is over 50%. Said another way, Delaware landowners are selling development rights to the state at over 50% below appraised value. The State of Delaware currently has approximately \$5.5 million allocated for the Purchase of Development Rights on farmland and an additional \$600,000 has been obligated in county funds. We are excited that the Delaware's county governments are now participating in the program and we hope for greater participation in the future. This county funding along with federal funding will increase the number of farms able to participate in permanent farmland preservation through PDR. We anticipate an \$8 million obligation per year in state and local funds for the purchase of agricultural easements on viable and important Delaware farmland.

## **VI FEDERAL SHARE REQUESTED**

We are requesting \$35.6 million over the five year life of the DCC project. These federal funds will be matched 1 for 1 with state and local funds. We request \$3.6 million this first year and then \$8 million per year for the next four years. This results in a total DCC,



FRPP request of \$35.6 million over five years. This will total to over a \$71 million government obligation towards farmland preservation in the First State over five years.

It is extremely important to remember that Delaware landowners are currently matching 1 for 1 every government dollar expended on farmland preservation. A \$71 million government obligation to farmland preservation will leverage at least \$71 million in private contributions towards the total easement value of well over \$142 million. We would suggest that the Federal participation rate of 50% towards state and local government match (and the over 50% private contributions rate) being proposed in this document represents a real value to the Federal government in leveraging dollars to purchase some of the most important, prime and productive land in the United States.

Again, the total easement value of Delaware farms under consideration for preservation would be approximately \$142 million, but the total federal governmental cost would be approximately \$35.6 million. **This means that although the federal government would be cost sharing at a 50% rate on the direct costs easement acquisition, the federal share on the value of the easement would be less than 25%.** These farms represent some of the finest cropland in the United States, as well as some of the best quality marshland, valuable timberland, and other natural resource lands. We believe that the proposal Delaware places before the USDA is one of the most cost effective and valuable approaches available in the United States today.

## **Farm and Rangeland Preservation Program**

### **Delmarva Conservation Corridor Program**

#### **BUDGET:**

<b>Year</b>	<b>Federal</b>	<b>State and Local</b>	<b>Private</b>
<b>2003</b>	<b>\$3,600,000</b>	<b>\$3,600,000</b>	<b>\$7,200,000</b>
<b>2004</b>	<b>\$8,000,000</b>	<b>\$8,000,000</b>	<b>\$16,000,000</b>
<b>2005</b>	<b>\$8,000,000</b>	<b>\$8,000,000</b>	<b>\$16,000,000</b>
<b>2006</b>	<b>\$8,000,000</b>	<b>\$8,000,000</b>	<b>\$16,000,000</b>
<b>2007</b>	<b>\$8,000,000</b>	<b>\$8,000,000</b>	<b>\$16,000,000</b>
	<b>\$35,600,000</b>	<b>\$35,600,000</b>	<b>\$71,200,000</b>

# **Delaware Agricultural Lands Preservation Program**

## **Data and Maps Section**

There is also a copy of the most recent Delaware Agricultural Lands Preservation Foundation Staff Report, which summarizes the program and its progress from inception. Also included is a spreadsheet comparison of regional state operated farmland preservation program data. This spreadsheet was recently updated, but we do not claim responsibility for the accuracy of data obtained from other jurisdictions.

The county scale maps depict Delaware's Farmland Preservation Program. The State has purchased the development rights to the farms shown as dark blue. The properties depicted as orange are in the ten year preservation program, explained earlier in this proposal, and await possible development rights purchase.

# Preservation Foundation

## PROGRESS REPORT

The Delaware Agricultural Lands Preservation Program was formed with the adoption of House Bill 200 in July 1991. It is the only official program that protects land for agricultural purposes. In 2003 local participation in this program began with matching funds from Sussex County government. There are very few land use controls at the state or local levels that effectively preserve, or attempt to preserve agricultural land - they attempt to “steer” or slow growth at best.

Participation in the program is *voluntary* and has two components. First, landowners join the program by creating an Agricultural Preservation District. An Agricultural Preservation District contains at least 200 contiguous acres that are devoted to agricultural and related uses. Any lands less than 200 usable (and contiguous) acres, but which are within three miles of an established district, can be enrolled into the program as a District Expansion.

Landowners who place their lands into Agricultural Preservation Districts agree not to develop those lands for at least 10 years, devoting the land only to agriculture and related uses. In return, the owners receive tax benefits, right-to-farm protection, and an opportunity to sell a preservation easement to the State that keeps the land free from development *permanently*.

There are now **130,115** acres in 527 Agricultural Preservation Districts and District expansions in Delaware. Out of the **130,115** acres currently in agricultural preservation districts, 351 properties encompassing approximately **70,453** acres have been permanently protected through the purchase and donation of preservation easements for **\$74,461,252** (see charts for breakdown by county).

High quality soils, significant agricultural infrastructure, historical and environmental significance are all factors that have been considered in the selection of farms for permanent preservation. Many of these farms are contiguous to already protected land and complement the State’s open space preservation efforts by creating natural buffers between development and public open space. Thus far, the program has been successful in striking a balance between two important goals:

- a) preserving a *critical mass* of crop land, forest land, and open space to sustain Delaware’s number one industry and quality of life, and
- b) providing landowners an *opportunity* to preserve their land in the face of increasing development pressures and decreasing commodity values.

With landowners volunteering to sell preservation easements at an average of 51 percent below appraised value, the Foundation estimates that \$26 Million may purchase easements on all of the farms of landowners currently seeking permanent preservation of their land. This is unheard of anywhere in the nation for a program of this nature. Yet, Delaware is in a position to accomplish this remarkable feat! Continued funding of the Program increases the desire for landowners to place their land into agricultural preservation districts rather than rezoning or subdividing for non-agricultural purposes. That fact, combined with the current permanent preservation of Delaware’s farms at a modest cost of \$1,057 per acre, is a true bargain for the State’s taxpayers of today and a wise investment for the generations to come.

### Delaware Agricultural Preservation Districts (Approved)

County	# Districts	Total Acres	Percentage
Kent	258	68,327	53%
New Castle	65	16,327	12%
Sussex	204	45,461	35%
Delaware	527	130,115	100%

### Delaware Easements Purchased\*

County	# Farms	Total Acres	Total \$ Spent
Kent	181	39,304	\$34,877,187
New Castle	46	8,654	\$13,375,302
Sussex	124	22,495	\$26,208,763
Delaware	351	70,453	\$74,461,252

\* includes properties currently under contract for easement purchase but not settled

### Preservation Easements by Rounds

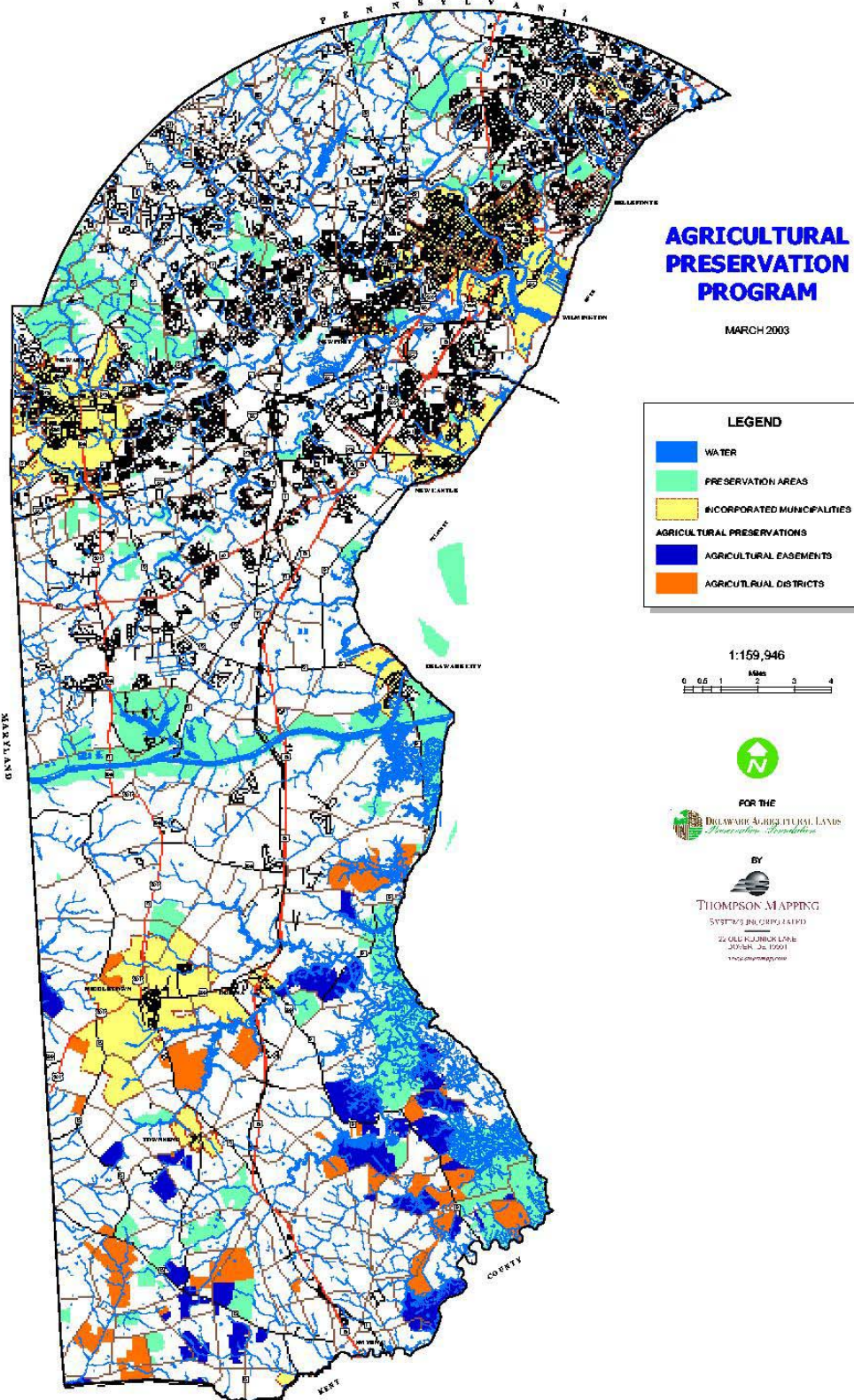
PDR Round	# Farms	Total Acres	Total \$ Spent	Cost Per Acre
Donated	1	300	N/A	N/A
1	32	8,670	\$11,253,556	\$1,298
2	35	7,444	\$6,669,959	\$896
3	31	7,309	\$7,237,317	\$990
4	55	12,412	\$13,728,452	\$1,106
5	85	17,875	\$16,340,513	\$914
6	34	6,544	\$5,586,532	\$854
7	33	4,346	\$6,339,275	\$1,420
8	45	5,553	\$7,305,648	\$1,316
Total	351	70,453	\$74,461,252	\$1,057

\*\* one easement donated in Round 1

## Regional Agricultural Preservation Program Comparison

State	Total Funding Spent	Total Number of Agricultural Easements	Agricultural Easements (AC)	Approx. Easement Cost (\$/AC)	Total Land Area (AC)	USDA 2002 Land in Farms (AC)	% of Total Land Area as Land in Farms	% of Total Land Area Permanently Preserved through Farmland Preservation	% of Total Land in Farms Permanently Preserved through Farmland Preservation	U.S. Census Est. July 1, 2002 State Pop.	Acres Preserved per 1000 People	Dollars Spent per Person
Delaware	\$74,461,252	351	70,453	\$1,057	1,250,954	560,000	44.8%	5.632%	12.581%	807,385	87.261	\$92.23
Maryland	\$258,048,105	1,300	198,275	\$1,301	6,204,053	2,100,000	33.8%	3.196%	9.442%	5,438,137	36.460	\$47.45
New Jersey	\$471,215,371	846	104,001	\$4,531	4,718,197	820,000	17.4%	2.204%	12.683%	8,590,300	12.107	\$54.85
Pennsylvania	\$503,455,396	2,073	247,157	\$2,037	28,684,522	7,700,000	26.8%	0.862%	3.210%	12,335,091	20.037	\$40.81
State		Total Number of Farms in Districts	District Total (AC)		Total Land Area (AC)	USDA 1997 Land in Farms (AC)	% of Total Land Area as Land in Farms	% of Total Land Area Preserved in Districts (10 year)	% of Total Land in Farms Preserved in Districts (10 year)			
Delaware		527	130,115		1,250,954	560,000	44.8%	10.401%	23.235%			

# NEW CASTLE COUNTY

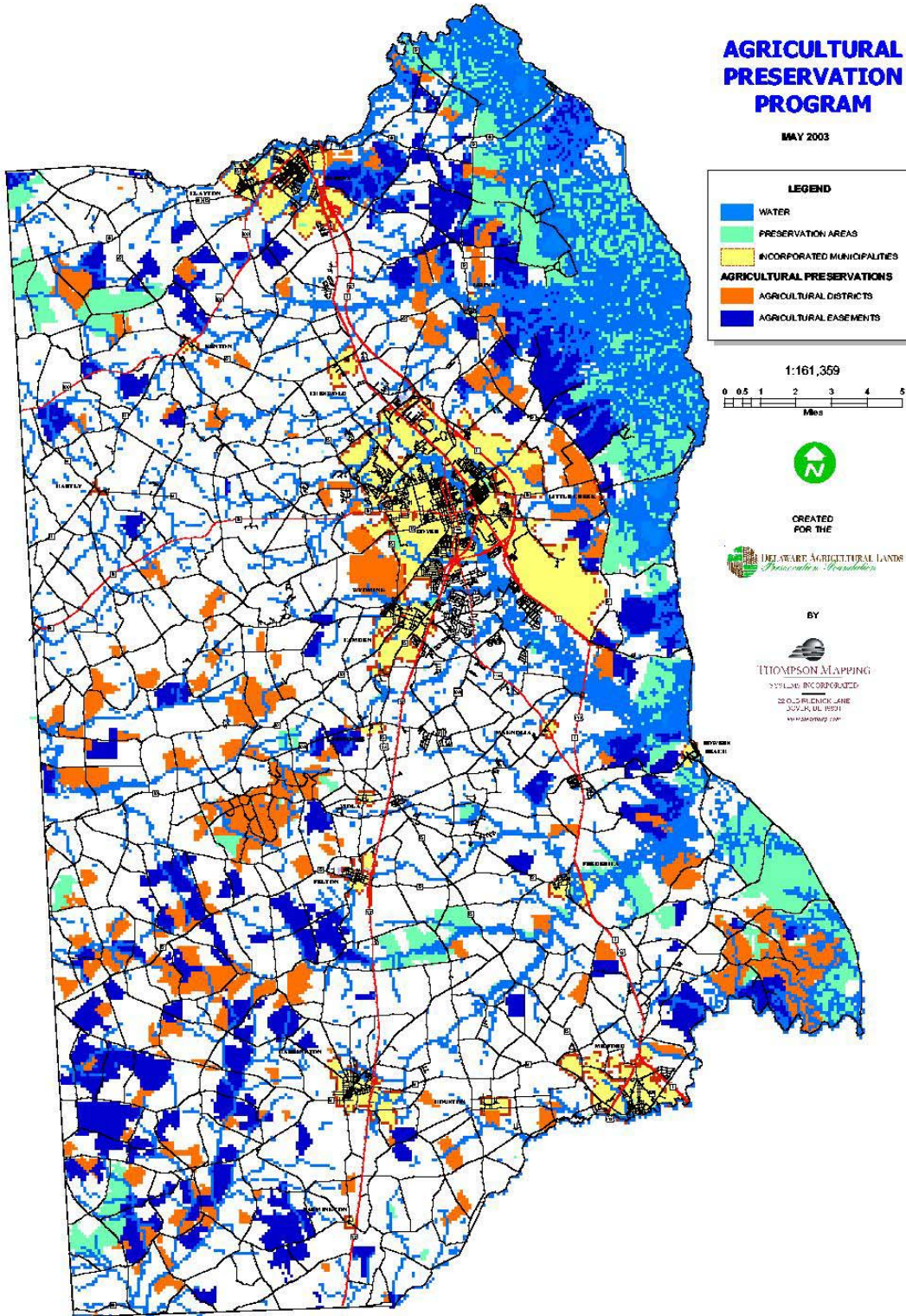




# KENT COUNTY

## AGRICULTURAL PRESERVATION PROGRAM

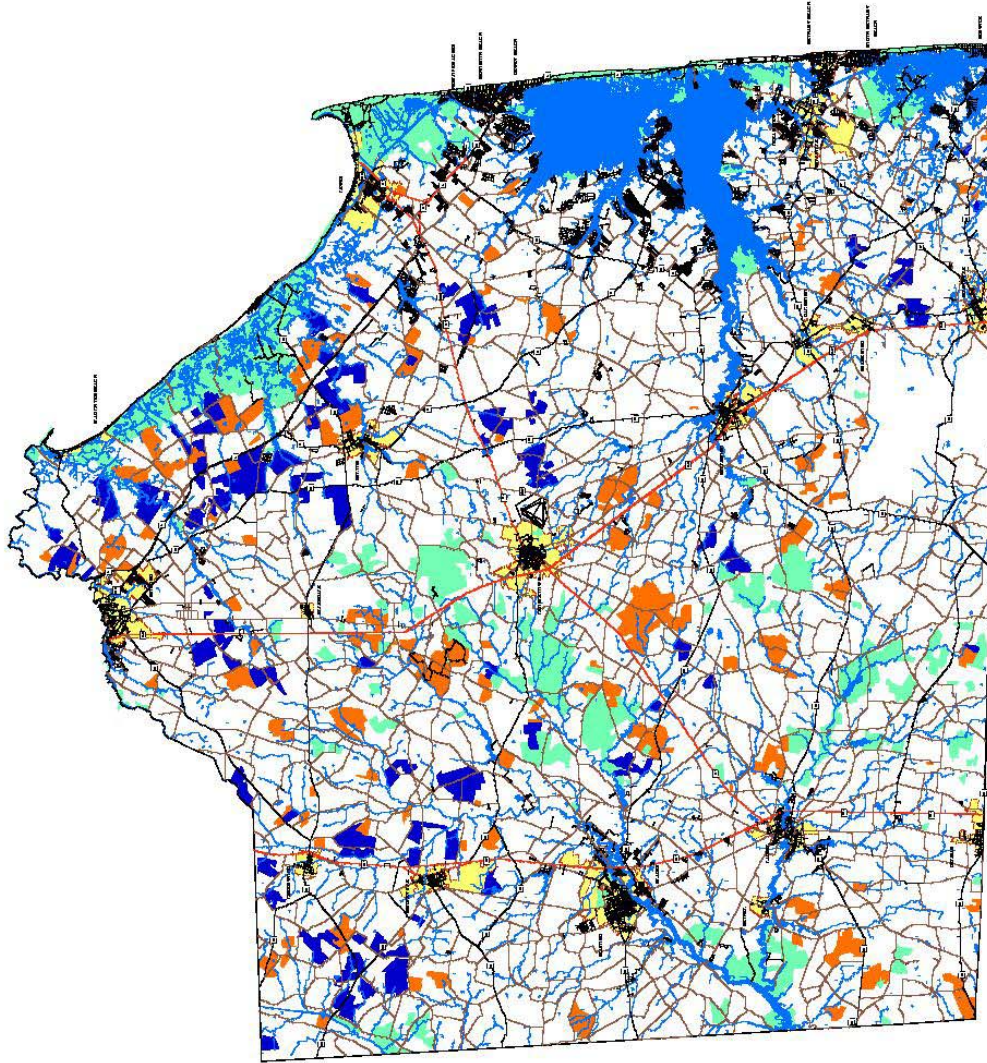
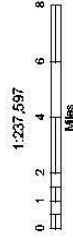
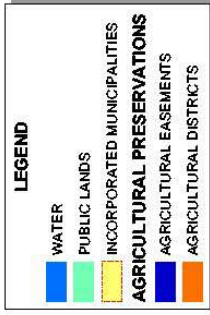
MAY 2003





# SUSSEX COUNTY

## AGRICULTURAL PRESERVATION PROGRAM





# **DELAWARE'S FOREST LEGACY PROGRAM**

## **Delmarva Conservation Corridor Proposal**

### **Background**

Forests are a vital component of Delaware's landscape. Forests comprise approximately 30 percent (375,000 acres) of Delaware and they provide a wealth of benefits to all Delawareans including cleaner air and water, wildlife habitat, recreational opportunities, and wood products. Delaware's Green Infrastructure Committee, a component of Governor Minner's Livable Delaware Initiative, has recognized the importance of protecting and maintaining this forest base. The primary method to protect these forests is through conservation easements and targeted fee simple acquisitions of the most critical forests. One program that can help Delaware to achieve this objective is the Forest Legacy Program.

The Forest Legacy Program (FLP) was authorized under the 1990 Farm Bill (PL 101-624) to conserve and protect important forest areas threatened by conversion to non-forest uses. This program, administered by the U.S. Forest Service, helps states to maintain a viable forestland base to ensure the production of economic, environmental and social benefits over the long term. States may only use Forest Legacy funds in areas designated in their Assessment of Need (AON) – the AON describes the state's forests, the threats to the forests, and those areas within the state that contain the most important forests, which are called the Forest Legacy Areas. Once the Secretary of the United States Department of Agriculture (USDA) approves the AON, the state is eligible to receive Legacy funds to purchase land and easements within the designated Forest Legacy areas.

### **Current Status**

The Delaware Department of Agriculture Forest Service (DFS) administers Delaware's Legacy Program. Delaware's AON was approved in December 1998, and there are four Legacy areas in Delaware – White Clay Creek, Blackbird/Blackiston, Redden/Ellendale, and Cypress Swamp. These areas contain the highest concentrations of forests in Delaware, including significant acreage already protected through public and private ownership. Delaware hopes to expand the Blackbird/Blackiston and Redden/Ellendale Legacy areas in 2003 to include additional lands targeted for protection by various natural resource organizations.

Currently, Delaware has received \$1.99 million of Forest Legacy funds to assist with the purchase of forestland and conservation easements within the Redden/Ellendale Legacy area. This project has the potential to become one of the largest forest protection efforts to date in Delaware, which would require additional Legacy funds. Furthermore, interest from other landowners continues to grow, therefore the need for additional funding is expected.

## **Future Needs**

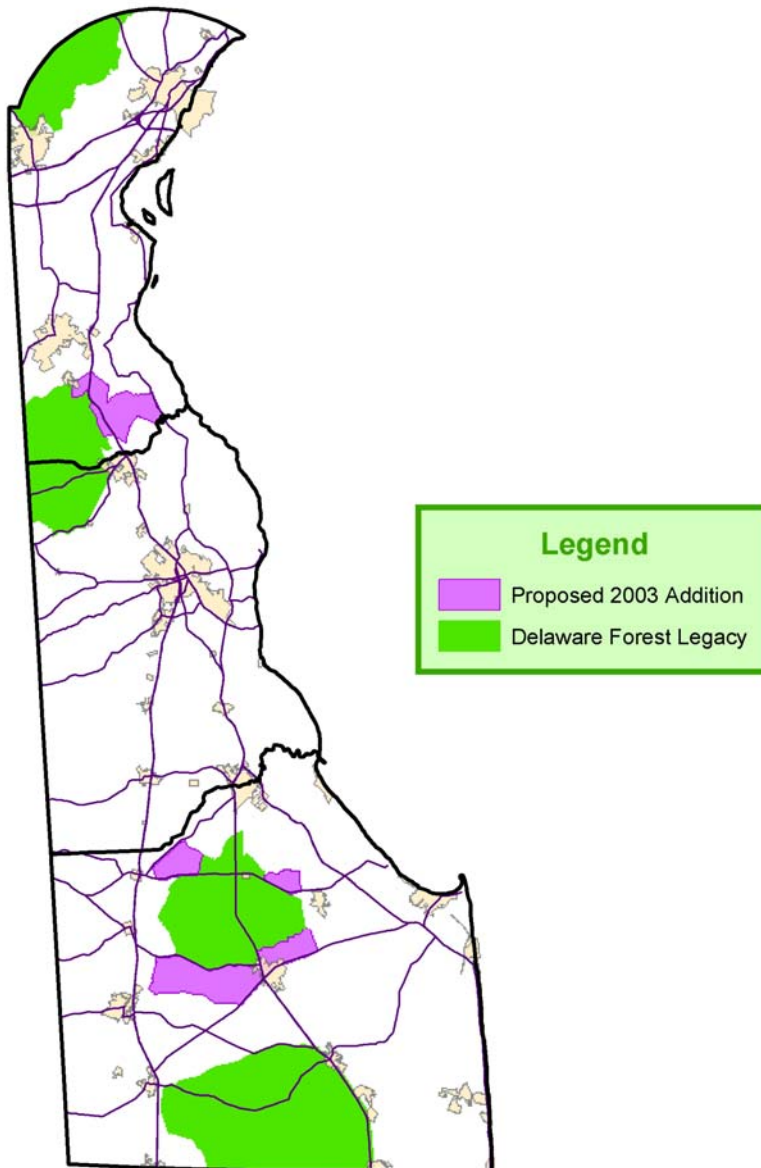
The DFS anticipates the need for at least \$1 million of Forest Legacy funding through the life of the 2002 Farm Bill. These funds will aid efforts to protect working forestlands throughout the state. These efforts will help to maintain a viable forest base for a variety of purposes, including wildlife habitat and the forest industry. Please see the map of Delaware's Frost Legacy Areas on the following page.

### **Forest Legacy Program Delmarva Conservation Corridor Program**

#### **BUGET:**

<b>Year</b>	<b>Federal</b>	<b>State and Local</b>
<b>2003</b>	<b>\$1,000,000</b>	<b>\$334,000</b>
<b>2004</b>	<b>\$1,000,000</b>	<b>\$334,000</b>
<b>2005</b>	<b>\$1,000,000</b>	<b>\$334,000</b>
<b>2006</b>	<b>\$1,000,000</b>	<b>\$334,000</b>
<b>2007</b>	<b><u>\$1,000,000</u></b>	<b><u>\$334,000</u></b>
	<b>\$5,000,000</b>	<b>\$1,670,000</b>

## Delaware's Forest Legacy Areas



# **Delaware's Wetlands Preservation And Protection Initiatives**

## **Delmarva Conservation Corridor Proposal**

### **I. Delaware's Wetlands Reserve Program**

The Wetland Reserve Program (WRP) in the state of Delaware has not received much attention over the past several years due to the Conservation Reserve Enhancement Program (CREP). With the CREP program, several hundred acres of cropland have been restored to wetlands because the program offers more money to the landowner with only a 15 year commitment. To date, Delaware only has 5 WRP projects for a total of 122.5 acres. In the last two years, the interest in WRP has greatly expanded. This interest is in restoring wooded wetlands that have been historically drained. **Currently, Delaware has 11 unfunded applications for a total of approximately 675 acres, at a funding cost of over \$600,000.** These wooded wetlands can be restored by simple ditch plugs, which are inexpensive and very effective. The benefits of WRP over CREP are the restoration has an easement for either a permanent easement or a 30 year easement. Of the 11 applications, 9 are for permanent easements. All of the WRP projects are reviewed and ranked by both NRCS and the US Fish and Wildlife Service. We estimate a need for an additional \$600,000 (over current budget allocations) per year over the next five years.

#### **Wetlands Reserve Program Delmarva Conservation Corridor Program**

##### **BUDGET:**

<b>Year</b>	<b>Federal</b>	<b>Private</b>
<b>2003</b>	<b>\$600,000</b>	<b>\$150,000</b>
<b>2004</b>	<b>\$600,000</b>	<b>\$150,000</b>
<b>2005</b>	<b>\$600,000</b>	<b>\$150,000</b>
<b>2006</b>	<b>\$600,000</b>	<b>\$150,000</b>
<b>2007</b>	<b>\$600,000</b>	<b>\$150,000</b>
	<b>\$3,000,000</b>	<b>\$750,000</b>

### **II. Delaware's Isolated Wetlands Protection Program**

#### **BACKGROUND**

The Advanced Notice of Proposed Rule Making (ANPRM) issued jointly by the Corps and EPA in January, 2003, solicits input from states to assess impacts to protecting wetlands if regulatory jurisdiction is scaled back based on redefining key terms in the Clean Water Act that enable Section 404 to regulate waters of the U.S., including wetlands. Part of the momentum behind this ANPRM stems from the SWANCC decision (Solid Waste Authority of Northern Cook County vs. Army Corps of Engineers, 2001; Supreme Court) removing isolated wetlands from

Sec. 404 jurisdiction. The key terms that are being evaluated are: isolated, navigable, adjacent, and tributaries to navigable. Each of these terms has significance in the ability of the federal government to protect freshwater wetlands and waters within the Clean Water Act. Therefore, more wetlands than those isolated wetlands exposed by the SWANCC decision could become unregulated.

### **CURRENTLY AT RISK**

Isolated wetlands, which have no connection to surface waters or other connected wetlands and are not adjacent to these waters, became at risk via the SWANCC decision. Included in this isolated wetlands scope, are some of Delaware's unique ecological communities, and important large-tract headwater wooded wetland flats (descriptions below).

In Delaware, the SWANCC decision has left more than 15,000 acres (~10%) of isolated wetlands at risk without any protection. Possible clarification at the federal level of Corps jurisdiction could reduce this number to 10-15,000 acres.

Delaware's isolated wetland acreage is a diverse assemblage of ecologically important habitat types. These isolated wetlands have varying degrees of ecological and socio-economic values. The following is a general listing of isolated wetland groups:

Rare and Unique Ecological Community Types (Category 1's) – Delaware has 5 types of these wetlands (Delmarva Bays or Coastal Plain Ponds, Atlantic White Cedar or Bald Cypress swamps, Sea-level fens, and Interdunal swales), all of which are represented in the isolated wetland base. These wetland types provide exceptional wetland functions and provide much of the habitat for unique and state or globally rare plant and animal species. These wetland types are also considered rare and unique communities as a whole, some of which are on the outermost edge of their continental range.

Isolated wetland/forested complexes – These complexes are found mostly in the large tracts of forested areas left on the Delmarva Peninsula. The importance of this type of wetlands association is the variety of habitat it offers. Many species that need large tracts of forested area to survive often depend on different wetland pockets interspersed with uplands. These large wooded tracts (>25 acres) form the base for what still exists in connecting habitat corridors.

Isolated forested wetlands headwater pockets – Although usually small in size (from 1 acres to 10 acres), these forested wetlands occur in the upper reaches of many watersheds. Most occur down the "spine" of the peninsula on poorly drained soils and offers incredible functionality in absorbing heavy precipitation events and recharging groundwater. Downstream resource health and property integrity would be jeopardized without the natural processes these isolated headwater wetlands provide. (Isolated wooded wetlands comprise more than 80% of all isolated wetlands).

Using the local Corps of Engineers current criteria for determining regulated wetlands (wetlands within the 100-foot distance from a waterway rule would result in **isolated** within the floodplain, waterway connected and adjacent) and *including* wetlands acreages of (by county, then statewide) Some of these acres are located within the piedmont, so the following estimate may be slightly high.

NCC – **3,062** of the 19,498 acres of freshwater wetlands federally unregulated (**16%**)  
 KENT – **4,324** of the 64,830 acres of freshwater wetlands federally unregulated (**7%**)  
 SUSSEX – **8,947** of the 101,979 acres of freshwater wetlands federally unregulated (**9%**)  
 STATEWIDE – **16,333** of 186,307 acres of freshwater wetlands federally unregulated (**9%**)

### **SOLUTION**

Isolated wetlands which are not located in the piedmont areas will be eligible for **wetland restoration (CP-23) under CREP**. Wetland restoration is only eligible on hydric soils in cropland that has been planted to an agricultural commodity 4 of the 6 years. During design of the projects, wetland hydrology shall be restored to the maximum extent possible, while 30% of the hydric soil area can be converted to a shallow open water complex. If fill is placed in the hydric soil area, this amount is subtracted from the 30%. The restored wetland in the isolated wetlands mapped by the state of Delaware can either be planted to native hardwood trees or be allowed to remain in an herbaceous vegetated condition, depending on the desires of the landowner. See attached maps for depiction of isolated locations in conjunction with biodiversity priority areas. The following budget is based on protection of 3,200 ac, which is the 20% of isolated wetlands not located in forest areas and positioned primarily on currently cropped acreage. In addition, this target figure would nearly double the amount of acres enrolled in CREP state-wide.

The following budget is estimated from average per acres cost\* of establishment and rental for a CREP CP-23 practice for 10 years. The federal and state shares are calculated on a total cost basis then divided by five for the life of the DCC.

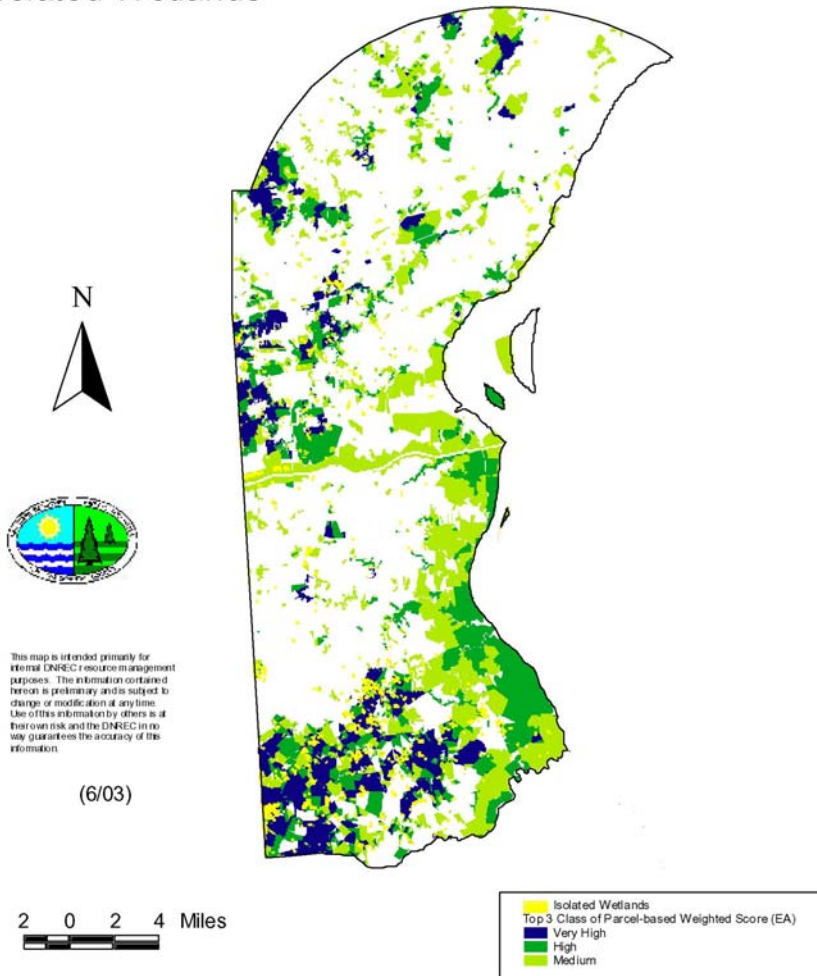
### **Wetlands Restoration Program CP-23 CREP Delmarva Conservation Corridor Program**

#### **BUDGET:**

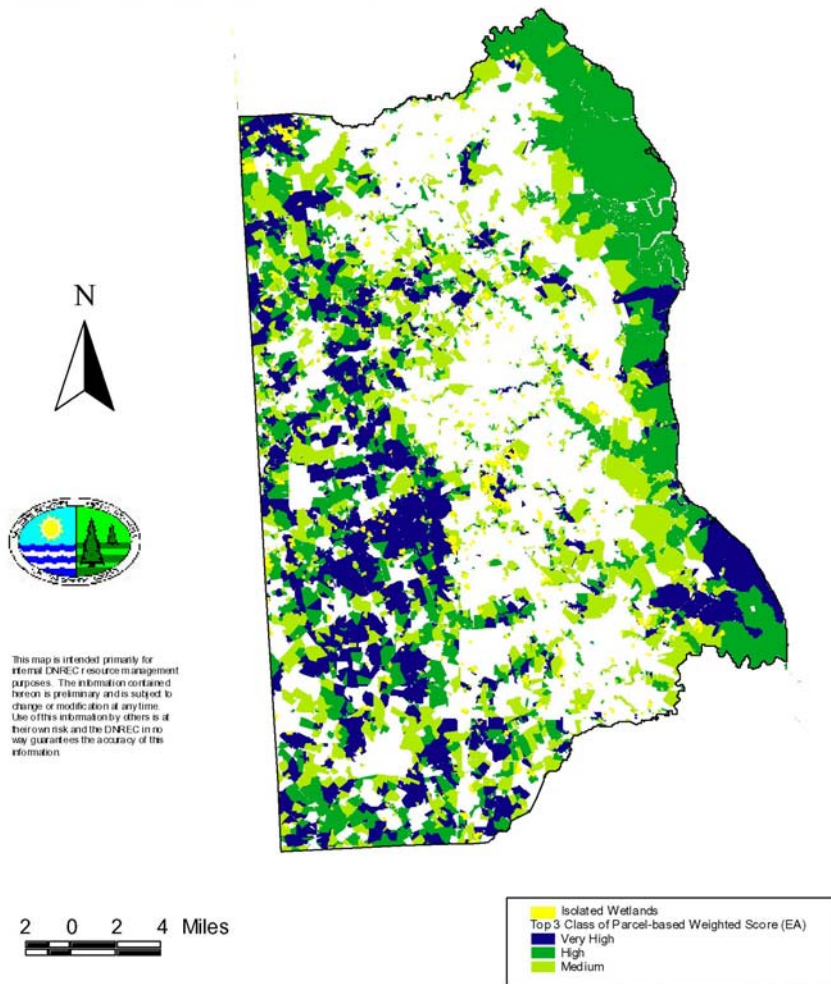
<b>Year</b>	<b>Federal</b>	<b>State</b>
<b>2003</b>	<b>\$1,009,280</b>	<b>\$270,000</b>
<b>2004</b>	<b>\$1,009,280</b>	<b>\$270,000</b>
<b>2005</b>	<b>\$1,009,280</b>	<b>\$270,000</b>
<b>2006</b>	<b>\$1,009,280</b>	<b>\$270,000</b>
<b>2007</b>	<b><u>\$1,009,280</u></b>	<b><u>\$270,000</u></b>
	<b>\$5,046,400</b>	<b>\$1,350,000</b>

\*Source: DNREC

# New Castle County Biodiversity Likelihood and Isolated Wetlands



# Kent County Biodiversity Likelihood and Isolated Wetlands

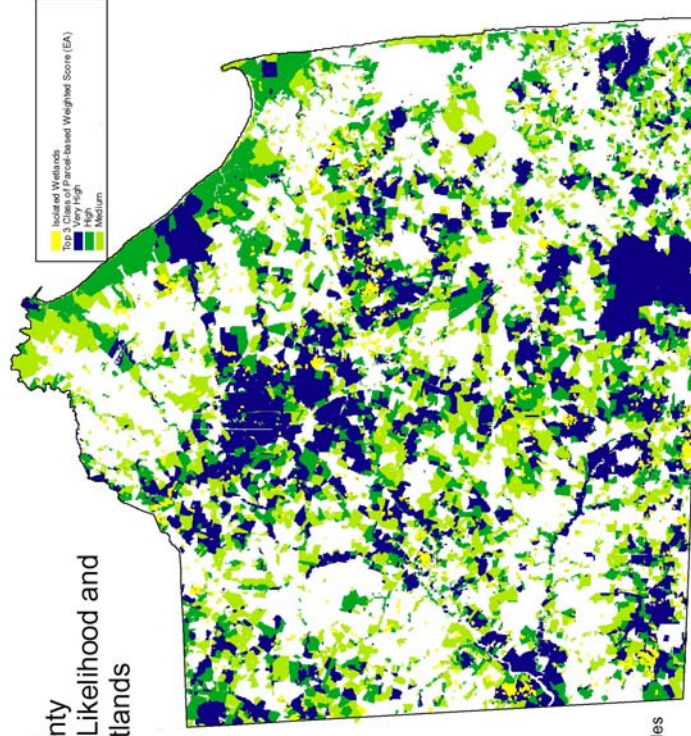




# Sussex County Biodiversity Likelihood and Isolated Wetlands



This map is intended primarily for internal (BAC) use and is not intended for publication. It is not intended to be used for any other purpose. The data on this map is not intended to be used for any other purpose. The data on this map is not intended to be used for any other purpose.



# **Vegetative Environmental Buffers for Poultry Houses**

## **Delmarva Conservation Corridor Proposal**

### **Delaware and Maryland**

#### **Background**

Nationwide, animal feeding operations are under intense scrutiny for potential air emissions impacts to air and water quality. Preliminary research findings from the University of Delaware (Bud Malone) show that planting tree as vegetative buffers can reduce/mitigate particulate and ammonia emissions. More comprehensive monitoring results to quantify potential reductions will be available in September, 2003. Additional benefits result from reduction of odors and “visual pollution” concerns of neighbors. This becomes increasingly important for many poultry-producing areas that face urban encroachment and a desire of the industry to co-exist with these residential neighbors. Approximately 65% of poultry houses currently use tunnel ventilation to maximize poultry productivity. Adoption of this practice may well exceed 80% over the next few years as the industry continues to rapidly adopt tunnel ventilation. With this technology the industry can now consider tree plantings around houses to improve energy efficiency and strengthen on-farm biosecurity.

#### **Current Status**

Bud Malone is presently collaborating with a diverse group of scientist and extension specialist from Pennsylvania and Iowa in an effort to develop a national research initiative grant to refine the practice and better define its cost effectiveness and efficacy. Using Delmarva as model, the intended outcome would be to develop guidelines and educational materials that could be used nationally.

Initially AMA and now EQIP offers cost share for installation of vegetative buffers or shelterbelts around poultry houses. Widespread adoption of this practice will require a focused outreach and technical assistance effort. Accelerated adoption rates may require additional funding for installation cost share in future years. There is currently \$170,500 dedicated within Delaware’s EQIP allocation for establishing this practice on poultry farms. Within Delaware in the past, there have been funds dedicated to this practice which have gone unused. We contend that this underutilization of available funds is due to a lack of focused outreach. In order to widely establish this conservation practice on Delmarva, a focused and aggressive outreach program is required.

## **Request**

Funds are requested to hire dedicated staff to work with poultry companies throughout the Delmarva region in the promotion, coordination and implementation of this program. This coordinator would work with the growers, nursery industry, and/or landscapers in the implementation of cost-effective, low maintenance plantings which require minimum involvement of the landowners. The dedicated staff will have technical expertise in forestry or horticulture, experience working to promote, design and install tree buffers and knowledge of the goals of the tree program for the poultry industry.

**This is an annual funding request of \$65,000 over the five year life of the project.** We estimate an aggressive outreach program could result in 700 growers or approximately 30% of poultry growers participating in the program within the two state region.

### **Poultry House Tree Planting Program Delmarva Conservation Corridor Program**

#### **BUDGET:**

<b>Year</b>	<b>Federal</b>
<b>2003</b>	<b>\$65,000</b>
<b>2004</b>	<b>\$65,000</b>
<b>2005</b>	<b>\$65,000</b>
<b>2006</b>	<b>\$65,000</b>
<b>2007</b>	<b><u>\$65,000</u></b>
	<b>\$325,000</b>

# **Irrigation**

## **Delmarva Conservation Corridor Proposal**

### **Background**

There has been much debate nationwide on whether or not the installation of new irrigation systems is an agricultural viability or environmental enhancement practice. We in Delaware do not see the situation as an either/or scenario. In fact, irrigation systems have multiple benefits to the farm economy, the overall economy, individual landowner/operator financial stability and operational diversification, as well as environmental benefits. The installation of new irrigation systems stimulates the overall economy and the farm economy by stimulating agricultural support system businesses. The farm economy is further stimulated by stabilizing, through risk reduction, the productive return on the crop planting investment. Installation of new irrigation systems further stabilizes the farm economy and the individual landowner's operation by allowing for crop diversification.

Particularly on Delmarva, due to our unique geomorphology and climatic conditions, the installation of irrigation systems has many environmental benefits. Strikingly apparent during the 2002 growing season, were the effects a drought can have on surface water quality. We received well below average precipitation during the growing season, resulting in an excess of nutrients in the soil. Crops did not receive enough precipitation to support vigorous growth and consequently did not uptake the normal amount of nutrients. In addition, the lack of precipitation meant the nutrients were not filtering through the soils, but laid on the surface. When rain finally came, the soils were "dry packed" and the nutrients were carried away in the run-off to the surface water system. This situation caused further degradation of our surface water systems.

### **Current Status**

Through EQUIP, USDA has prudently funded cost sharing programs to improve existing irrigation systems and there by conserve water. Within Delaware's 2003 allocation, \$200,000 has been marked for existing irrigation systems improvements. We believe this to be a necessary step. All irrigation system should be fitted with the most current technology. We realize there are water consumption/availability issues that must be considered and we support the continued improvement of (1) existing systems and (2) irrigation system technologies.

## Request

Both the Delaware Conservation Corridor Plan Steering Committee and the general public agreed that the installation of new, best current technology, irrigation systems is a priority. We believe this is a necessary practice both from an agricultural viability and an improved environmental integrity perspective. Again, accounting for water allocation/availability concerns is extremely important. We propose to institute a cost share on new irrigation systems practice with the help of USDA NRCS and in consolidation with the Delaware office of the United States Geologic Survey. **Funding for new irrigation systems will be prioritized based on an individual owner/operator's current level of participation in environmental best practices and demonstrated commitment to land preservation, as well as watershed location. Priority will be given to landowner/operators located in watersheds where USGS has not determined there are groundwater availability deficits. In addition, priority will be given to land owners who participate in Delaware's Farmland Preservation Program.** Our request is for **\$2 million per year** over the five year life of the DCC. We do not have a preference for the funding mechanism – whether AMA or EQUIP. We assert that funding of new irrigation systems would meet the intent of either program. We also assert that landowner cost sharing at a 25% level or lower is appropriate.

### **BUDGET:**

#### **Irrigation System Program**

#### **Delmarva Conservation Corridor Program**

### **BUDGET:**

<b>Year</b>	<b>Federal</b>	<b>Private</b>
<b>2003</b>	<b>\$2,000,000</b>	<b>\$500,000</b>
<b>2004</b>	<b>\$2,000,000</b>	<b>\$500,000</b>
<b>2005</b>	<b>\$2,000,000</b>	<b>\$500,000</b>
<b>2006</b>	<b>\$2,000,000</b>	<b>\$500,000</b>
<b>2007</b>	<b><u>\$2,000,000</u></b>	<b><u>\$500,000</u></b>
	<b>\$10,000,000</b>	<b>\$2,500,000</b>

# **Invasive Species Program**

## **Delmarva Conservation Corridor Proposal**

### **BACKGROUND**

Delaware Invasive Species Council (DISC) is a 501(3)C corporation dedicated to preventing the introduction and reducing the impact of non-native species. A DISC committee has been working for more than a year to develop an “Official” list of invasive plants. This list will form the basis of a public initiative, *Planting for a More Livable Delaware*. This initiative follows the Delaware Nursery & Landscape Association’s adoption of a Voluntary Code of Conduct for reducing the sale and propagation of invasive plants. Publication of the Official list is scheduled for September 13, at an Invasive Plant Conference, and is expected to be formally endorsed by the State of Delaware. The initiative will target the nursery industry, professional landscapers, homeowners and the agricultural community. The initiative also recognizes the profoundly negative impact that invasive plants have on wild and cultivated lands. Furthermore, there are numerous pathways by which plantings in urban and suburban areas can move into natural and farm areas, where they become highly invasive.

Habitat loss (suburbanization) and invasive species represent the two largest threats to biodiversity.<sup>1</sup> Agriculture has been identified as a threat to biodiversity because farming can fragment habitats, destabilize streambanks, and cause erosion. However, farming practices can benefit wildlife and biodiversity by adding conservation buffer strips.

This project aims to demonstrate that conservation buffer areas of native plants can be compatible with production agriculture and provide an environmental benefit. Studies by University of Delaware researchers have shown that invasive plants have a negative impact on phytophagous insects. Contrasts of 12 alien and 16 native plant species, based on crude morphological features, habitat preferences and relatedness shows a highly significant feeding bias toward native plants.<sup>2</sup> This implies that phytophagous insects are unable to transfer energy from invasives up the food chain. Thus, buffer zones and hedgerows with non-native, invasive plants break a key link in the food chain necessary for sustainable biodiversity.

### **GOAL**

This project aims to demonstrate the vital role farms can play in conservation by providing buffer zones of native, non-invasive vegetation. It is expected that these areas will support larger populations of phytophagous insects, and thus predatory and parasitic insects. These natural enemies, in turn, can benefit agriculture by reducing the need for pesticide applications.

## LOCATION

This project would be located at Alexander Farms, Townsend, DE. Alexander Farms is in Delaware's Farmland Preservation program, and thus will remain as farmland for the foreseeable future. Approximately 75% of the 230-acre farm is cultivated, primarily in a corn-soybean rotation. The study site would be situated along a ditch and hedgerow. The ditch has a dense stand of *Phragmites*, along with multiflora rose and other invasive plants. Water from the ditch feeds into Blackbird Creek. Hugh Dugan, son of Marie Robinson, the current owner of Alexander Farms, has agreed to allow this project to be conducted on the farm for the duration, without interference.

## PARTNERSHIPS

- Delaware Department of Agriculture, matching funds, invasive and weed monitoring (Faith Kuehn)
- Delaware Natural Resources and Environmental Control, Heritage Program, matching funds, plant survey (Olin Allen, Invasive Species Specialist)
- Delaware Invasive Species Council, consultation on native plant installation (Bill McAvoy, Botanist, DNREC Natural Heritage, Steve Castorani, Co-Owner North Creek Native Plant Nurseries)
- Dawson Corporation, invasive plant removal
- University of Delaware, Dept. Entomology and Wildlife Conservation, insect survey, native plant consultation (Douglas Tallamy, Ph.D., Department Chair and graduate students). Graduate students will provide dedicated, cost-conservative labor. An additional benefit of their participation is that the results will be published and presented in professional meetings. This will not only publicize the project, but also provide information to a broader audience.

## WORK PLAN

This is envisioned as a multi-year project, with a starting date of August 1, 2003.

2003-2004 (Year 1). *Plant and insect survey (baseline), invasive plant removal, land stabilization.* A suitable study site will be agreed upon by the Partners, in consultation with Mr. Dugan. The existing plant community will be cataloged, and insect populations sampled. Contractors will clear the study area and stabilize the ditch. Partners will develop a landscape plan for the study area.

2004-2005 (Year 2). *Native plant installation, invasive recurrence monitoring, insect survey.* The landscape plan will be installed, along with a few crop plots. Invasive plants that re-emerge, regrow or reseed will be eliminated. Insect sampling will continue.

2005-2006 (Year 3) – *Plant and insect survey, invasive monitoring.* A few crop plots will be installed. Invasive plants that re-emerge, regrow or reseed will be eliminated. Insect sampling will continue.

## BUDGET:

Year 1	Invasive plant removal	\$15,000	
	Plant survey	\$ 5,000	
	Landscape planning	\$ 5,000	
	Insect survey	<u>\$15,000</u>	
	TOTAL	\$40,000	(\$20,000 grant, \$20,000 match)
Year 2	Native plant purchase	\$15,000	
	Plant installation	\$ 2,000	
	Invasives removal	\$ 3,000	
	Insect survey	<u>\$20,000</u>	
	TOTAL	\$40,000	(\$20,000 grant, \$20,000 match)
Year 3	Plant replacement	\$ 2,000	
	Invasives removal	\$ 3,000	
	Insect survey	<u>\$20,000</u>	
	TOTAL	\$25,000	(\$12,500 grant, \$12,500 match)

## REFERENCES

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2. Baity, R. M., D. W. Tallamy and J. P. Pesek. Alien Plants and the  
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# **ECOSYSTEM SERVICES VALUATION/COMPENSATION**

## **Delmarva Conservation Corridor Proposal**

### **Overview**

Those critical services beneficial to humans that healthy ecological systems provide, termed *ecosystem services*, derive directly or indirectly from ecosystem functions. Ecosystems consist of living organisms (plants and animals), their complex and dynamic interrelationships (communities and processes), and their interactions with the non-living portions of their environment (natural cycles). Some examples of ecosystem services are: (from *Nature's Services*, 1997, Gretchen C. Daily, ed.) purification of water and air, mitigation of floods and droughts, partial stabilization of climate through carbon sequestration, detoxification and decomposition of wastes, generation and renewal of soil and soil fertility, pollination of crops and natural vegetation, and maintenance of biodiversity (plants, animals, and their processes). In general these services are regarded as “free” and so traditionally have been largely taken for granted.

In fact, progressive degradation of ecosystems leading to their diminished capacity to “deliver” services has led to wider recognition of the values of healthy ecosystems to the human population. How to correctly value the services in terms of currency and market forces has eluded economists for decades. Now “ecological economists” are attempting to devise formulas and models that enable placing credible dollar values on specific services within specific geographic areas. Should any of these mechanisms achieve wide acceptance the logical extension of valuation would be compensation to those lands that provide the services by those who benefit from the services. Whether such an initiative is sustainable over the long term will depend upon the public perceptions of working lands and the value placed on the visual benefits of such lands. Successive surveys appear to show that the public appreciation and concern for working lands is increasing

### **Recommendation**

The following narrative encapsulates committee thoughts to date on initial outreach, education, research, possible implementation of a pilot project, and funding.

The subcommittee recommends holding three or four half-day roundtable discussions, each centered on a specific topic of interest to working lands owners and other natural resource stakeholders, such as watermen and environmental advocates. Possible topics would include surface water quality, aquifer recharge areas, and wetlands. The objective would be to develop consensus on the best analytical tools available and to suggest management strategies relating to

land-based services. Use of a professional facilitator is recommended, and a “white paper” would be produced following each session. Roundtables would be held in early November, December, January, and possibly February.

**The DCC Advisory Committee proposes to then co-sponsor an educational forum** with the Biodiversity Conservation Partnership to increase general knowledge of ecosystem services on the Delmarva Peninsula, understand which services are extensively provided by best-practice farms, and evaluate models created and applied in other states or regions. There is special interest in a University of Maryland applied research project currently underway for the Maryland DNR to create a landscape-based ecosystem value assessment protocol for the state. A report is expected this summer.

The one-day forum will be held in Spring 2003. The forum planning committee membership will be peninsula-wide and include public and private sector representation from both DCC and Biodiversity Conservation Partnership. Advance circulation of the roundtable “white papers” to the target audience—for example, farmers and other ag community representatives, the conservation/environmental community, and interested members of the general public—will be important to ensure informed participation. A half day will be devoted to presentations by experts and the other half day to discussion of roundtable output. The goal of the forum will be convergence of environmental and agricultural community interests. Speakers and discussion facilitators will be drawn from academic institutions, government, and private firms and represent state-of-the-art knowledge and experience. A portion of a \$25,000 grant secured by DNREC may be used to partially offset forum expenses.

**The Delaware DCC Advisory Committee recommends obtaining a grant of \$100,000 per year to fund the cost balance for the forum and the subsequent studies and/or pilot projects through 2007.** Research needs relating to Delaware/Delmarva ecosystem service valuation will be identified by the forum and possible pilot projects suggested for consideration. In 2004 specific ecological service valuation research projects, for example surveys or case studies, will be undertaken preliminary to designing and conducting pilot valuation/compensation projects. Many of these projects will be conducted through the five year life of the DCC and perhaps on past that point in time. However, other projects will have a shorter life and the data obtained thorough these projects may have immediate positive outcomes for farm viability and environmental conservation on the Delmarva Peninsula. Many of these demonstration projects and finds will translate to other areas of the country.

In 2005-2007 one or more pilot projects will be conducted to demonstrate ecosystem service valuation and compensation within one or more small watersheds. Water purification services from wetlands, forests, and/or riparian buffers is a suggested focus; climate moderation through carbon sequestration should also be considered. Methods for evaluation of the efficacy of the pilot(s) will be incorporated into project design. **Long-term funding for land-based ecosystem services compensation will come from both private and public sources to be identified as part of the project.**

The concepts presented here are not new. The concept of the Conservation Security Program is to reward farmers who have implemented BMPs and demonstrated natural resource stewardship

through their own initiative. Delmarva jurisdictions also recognize that working landscapes provide a number of natural resource benefits to the public which are seldom recognized or rewarded. These include groundwater recharge, carbon sequestration, retention of wetlands and wildlife habitats and stream corridor management. We propose that the work performed here be done in a regional or multi-state fashion. Delaware and Maryland are both interested in pursuing this venture jointly.

In addition, we assert that the Delmarva Conservation corridor Demonstration Program or DCC is the perfect place to initiate a demonstration project for CSP. These initiatives should be bundled with many if not all the other proposals forwarded through the DCC Plan.

**BUDGET:**

**Ecosystems Service Evaluation Program (CSP)  
Delmarva Conservation Corridor Program**

**BUDGET:**

<b>Year</b>	<b>Federal</b>	<b>State</b>
<b>2003</b>	<b>\$100,000</b>	<b>\$25,000</b>
<b>2004</b>	<b>\$100,000</b>	
<b>2005</b>	<b>\$100,000</b>	
<b>2006</b>	<b>\$100,000</b>	
<b>2007</b>	<b>\$100,000</b>	
	<b>\$500,000</b>	<b>\$25,000</b>

# **Mid-Atlantic Bio-Diesel Commercialization Project**

## **Delmarva Conservation Corridor Proposal**

**Mid-Atlantic Biodiesel Production Facility Development/  
Mid-Atlantic Biodiesel (MAB) Company**

### **Project Description**

Mid-Atlantic Biodiesel Exploratory Committee is currently finalizing plans for the creation of a biodiesel manufacturing company, Mid-Atlantic Biodiesel, Inc. (MAB) with the goal of building a 5.0 million gallon per year biodiesel plant in Delaware in FY 2004. The facility is expected to be the first biodiesel manufacturing plant built in the Northeast U.S. and will benefit by its close proximity to the major metropolitan areas of Philadelphia, Baltimore, Washington D.C. and New York City.

The 5.0 million gallon per year biodiesel manufacturing facility, based upon using refined soybean oil feedstock, is expected to cost \$4.3 million, which includes a 20% contingency reserve. The addition of yellow grease feedstock process capability is expected to add \$0.5 million to the capital cost. Project economics are based on an estimated capital cost of \$4.8 million.

### **DCC Project Request**

**\$500,000.00**

This request represents a portion of the working capital line. The working capital line is expected to have a borrowing base equivalent to 70% of the company's inventory and accounts receivable. The funds are to be used for operating/start-up expenses.

**Project Leaders:**

Martin Ross, Chairman of Mid-Atlantic Biodiesel Exploratory Committee

Geoffrey S. Soares, Biodiesel Commercial and Business Development Consultant

W. Wes Berry, Biodiesel Technical and Operations Consultant

Michael T. Scuse, Delaware Secretary of Agriculture, Chairman of Delaware Transportation Fuels Working Group

**Project Partners/Other Cooperators:**

U.S.D.A. Rural Development \$60,000.00\*

Delaware Soybean Board \$25,000.00\*

\*Value-added grants received from U.S.D.A. and Delaware Soybean Board in April/May 2003.

**Additional funding needed as follows:**

MAB currently **seeking private and** government funding partners.

\$3.6 million 10-year term loan with floating interest rate of Prime plus 2% per year.

MAB will seek a USDA Business and Industry loan guarantee for 80% of the loan.

Working capital requirements of \$2.1 million. MAB to borrow \$1.5 million against this working capital line with the balance to be financed from equity and a term loan.

**Benefits to the Delaware Conservation Corridor:**

Delaware's Conservation Corridor Steering Committee viewed this project as significant for both agricultural viability and environmental enhancement. Reducing our reliance on fossil fuels benefits the overall economy and in this case has direct positive impacts to the agricultural economy by providing an alternative market for soy products. The more market outlets we can identify and leverage for our Delaware producers then the more we increase the stability of our farm economy. A more stable farm economy leads to further growth within the agricultural system and thereby lead to retention of the agricultural land base. As discussed previously, agricultural lands provide wildlife habitat and contribute to the overall ecological health of the region, while sprawling residential development tends to degrade our natural systems. In addition, the use of soy-diesel as opposed to fossil fuels will lead to improved air quality.

**Economic Benefits to Delaware:**

The following economic benefits are anticipated:

**Direct Economic Benefits:**

The facility would create jobs for 15 employees to operate and manage a five million gallon per year biodiesel production facility.

All are skilled positions that would command at least \$10/hour for labor and most probably, \$50,000.00 or more per year for management positions.  
The facility would provide business and tax revenues for the state.

**In-Direct Economic Benefits to Agriculture:** (See background notes)

Estimated increase in income to Delaware farmers by \$7.5 million per year and create 325 new jobs. The additional income to soybean producers equates to approximately \$34 per acre for every acre of soybean grown in the state.  
Contribute to maintaining a viable soybean industry in the state.

**Project Feasibility Study and Business Plan development currently underway.**

Expected date of completion: June 30, 2003

MAB currently investigating several possible sites for possible location of facility. Discussions with existing entities regarding hosting site and with government entities requiring permits. Expected date of completion: Feb. 2004. MAB entered into MOU with World Energy Alternatives, Inc. (WEA) to market all biodiesel produced in MAB facility. Transfer of MOU with WEA from MAB Exploratory Committee to MAB, Inc. completed within 30 days of business plan completion.

MAB currently discussing biodiesel process technology with American BioFuels (ABF).

MAB currently investing suppliers of feedstock and availabilities.

**Next Steps**

Create a charter Board of Directors within 30 days of business plan development.

Transfer the MOU with WEA from MAB Exploratory Committee to MAB, Inc. (30 days from business plan completion)

Prepare accredited stock offering targeting farmer investors. (As the company expands, opportunities will be available to smaller farmer/investors to participate.) Timing TBD.

All financing in place by February 2004.

Site selection and permits completed by February 2004.

Construction Start Date: late Spring 2004

Production Start-up: Fall 2004

**In-Kind Contributors/Supporters of Biodiesel Efforts:**

Ruth Ann Minner, Governor of Delaware  
Delaware Energy Task Force/Transportation Fuels Work Group  
Delaware Alternative Fuels Working Group  
Secretary Michael T. Scuse, Delaware's Secretary of Agriculture  
Delaware Department of Agriculture  
Delaware Soybean Board  
United Soybean Board

National Biodiesel Board  
Maryland Soybean Board  
Pennsylvania Soybean Board  
Delaware Farm Bureau  
Delaware Economic Development Office  
Delaware Division of Research, Technical Advisory Office  
Delaware Biotechnology Institute  
Del-Easi  
Delaware Energy Office  
Maryland Energy Office  
Delaware Bioenergy Consortium  
Delaware Clean Air Committee  
Delaware Dept. of Transportation  
Delaware Dept. of Education  
Delaware Dept. of Natural Resources and Environmental Control  
Connectiv Power Delivery  
Delaware Electric Cooperative, Inc.  
Dupont Corporation  
Perdue, Inc.  
Tri-Gas & Oil Company  
Peninsula Oil Company  
Southern States Co.  
U.S. Senator Joseph Biden  
U.S. Senator Tom Carper  
U.S. Representative Mike Castle

## Project Background

The soybean industry is intrinsic to the health and viability of agriculture in Delaware. More acres are planted in soybeans than any other crop. With sagging commodity prices and increased global competition, the Delaware Soybean Board initiated a soy biodiesel program designed to add value to the soybean crop and increase the soybean farmer's per acre income. The Board recognized that soy biodiesel represented the largest potential industrial use of soybeans, therefore, increasing soy biodiesel's use would increase soybean demand and soybean prices.

In 2000 the Delaware Soybean Board, representing the more than 1100 soybean farmers in the state, began education/promotion efforts to encourage the use of biodiesel in government and public utility fleets, as well as to the farmers and the general public. Due to the diligent efforts of the Board, the following fleets are using soy biodiesel as a replacement for regular diesel fuel:

Delaware Department of Transportation  
Delaware Department of Agriculture  
Delaware Department of Natural Resources and Environmental Control  
Delaware Solid Waste Authority  
Sussex County Conservation District  
Connectiv Power Delivery  
Delaware Electric Cooperative, Inc. (start date: July 2003)  
Delaware Department of Education (pilot study in school buses)

Educational/promotional efforts have centered around the benefits of soy biodiesel as a home-

grown alternative to diesel fuel that provides significant environmental and health benefits for our state and region.

Through the efforts of the Board, the following public fueling stations in Delaware now offer soy biodiesel fuel for sale to State of Delaware fleets, private industry, farmers, and the general public.

Uncle Willie's station in Bridgeville  
 Uncle Willie's station in Woodside  
 Uncle Willie's station in Millsboro  
 Clement Fuels in Clayton

In addition, the Board has encouraged private companies to provide direct delivery to fleets and agribusinesses/on-farm.

Peninsula Oil, Inc. in Seaford  
 Pep-Up, Inc. in Georgetown  
 Clements Fuels in Clayton  
 Southern States Smyrna-Clayton Cooperative  
 Southern States Co. in Milford  
 Tri-Gas & Oil Co. in Federalsburg, MD

Funds Used to Promote/Educate Biodiesel Benefits: FY 2000-FY 2003 (to date). The following organizations, state agencies, and businesses have funded biodiesel promotion/education projects specifically targeted in Delaware and the region. The amounts listed do not reflect in-kind contributions.

Delaware Soybean Farmers	FY 2000	\$10,000.00
(Delaware Soybean Board)	FY 2001	\$18,351.38
	FY 2002	\$16,475.90
	FY 2003 (to date)	\$55,215.75**

\*\*FY 2003 includes grant to MAB and funding of soy biodiesel heating fuel study in a Delaware school.

DSB Total to date:	\$100,043.03
Governor Ruth Ann Minner's Office	\$10,000.00
Delaware Department of Agriculture	\$ 27,500.00
United Soybean Board (national board) (for DE only)	\$ 50,000.00
Maryland Soybean Board (DE initiated programs only)	\$ 7,500.00
Pennsylvania Soybean Board (DE initiated programs only)	\$ 7,500.00
Delaware Energy Office	\$ 5,000.00
Maryland Energy Office	\$ 5,000.00
Perdue, Inc.	\$10,000.00



Total Project Funds Spent to date in Delaware: \$222,543.03

# Total Budget

## Delmarva Conservation Corridor Proposal

Program	Federal Share	State Share	Private Share
Advocates Office	\$1,000,000	In Kind	
Seed Grant Program	\$100,000		
Farm and Rangeland Preservation Program	\$35,600,000	\$35,600,000	\$71,200,000
Forest Legacy Program	\$5,000,000	\$1,670,000	
Wetlands Reserve Program	\$3,000,000		\$750,000
Wetlands Restoration Program (CREP CP-23)	\$5,046,400	\$1,350,000	
Vegetative Environmental Buffer Coordinator	\$325,000		
Irrigation System Program	\$10,000,000		\$2,500,000
Invasive Species Demonstration Project	\$52,500	\$52,500	
Ecosystem Service Evaluation/Compensation Program	\$500,000	\$25,000	
Mid-Atlantic Biodiesel Project	\$500,000		
<b>TOTALS</b>	<b>\$61,123,900</b>	<b>\$38,697,500</b>	<b>\$74,450,000</b>

# Delaware Steering Committee Membership

## Delmarva Conservation Corridor Proposal

NAME	STREET/BOX	TOWN, STATE	ZIP CODE	E-MAIL	ORGANIZATION
Baker, Robert	PO Box 162	Odessa, DE	19730	<a href="mailto:rlbaker28@earthlink.net">rlbaker28@earthlink.net</a>	DE Farm Bureau
Brown, Michael	89 King's Highway	Dover, DE	19901	<a href="mailto:Michael.Brown@state.de.us">Michael.Brown@state.de.us</a>	DNREC
Burris, David	324 Jebb Road	Wyoming, DE	19934	<a href="mailto:DRBPWA@aol.com">DRBPWA@aol.com</a>	Kent County Levy Court
Clifton, Donald	306 Warner Road	Milford, DE	19963	<a href="mailto:wdelifton@hotmail.com">wdelifton@hotmail.com</a>	FFS
Davis, Mark	2320 South DuPont Highway	Dover, DE	19901	<a href="mailto:mark@dda.state.de.us">mark@dda.state.de.us</a>	DE Department of Agriculture
Dayton, Jeff	201 N. Walnut Street, Suite 107	Wilmington, DE	19801	<a href="mailto:jeff.dayton@mail.house.gov">jeff.dayton@mail.house.gov</a>	Congressman Castle's Office
Evans-Stanton, Sherri	89 Kings Highway	Dover, DE	19901	<a href="mailto:Sherri.EvansStanton@state.de.us">Sherri.EvansStanton@state.de.us</a>	DNREC
Fleming, Lorraine	19 Quail Crossing	Wilmington, DE	19807	<a href="mailto:lorraine@dnsashland.org">lorraine@dnsashland.org</a>	DE Nature Society
Johnson, Kate	300 S. New Street, Suite 2004	Dover, DE	19904	<a href="mailto:kate.johnson@mail.house.gov">kate.johnson@mail.house.gov</a>	Congressman Castle's Office
Kautz, Richard	PO Box 417, No 2 The Circle	Georgetown, DE	19947	<a href="mailto:rkautz@sussexcounty.net">rkautz@sussexcounty.net</a>	Sussex County
Kepfer, Sally	1203 College Park Drive, Suite 101	Dover, DE	19904	<a href="mailto:Sally.Kepfer@de.usda.gov">Sally.Kepfer@de.usda.gov</a>	NRCS/USDA
Kreiner, Andrea				<a href="mailto:andrea.kreiner@state.de.us">andrea.kreiner@state.de.us</a>	Governor's Office
Lally, Mark	12 The Circle	Georgetown, DE	19947	<a href="mailto:Mark_Lally@carper.senate.gov">Mark_Lally@carper.senate.gov</a>	Senator Carper's Office
Lawrence, Louise	50 Harry S. Truman Parkway	Annapolis, MD	21401	<a href="mailto:LawrenL@mda.state.md.us">LawrenL@mda.state.md.us</a>	Maryland Department of Agriculture
Martin, Peter	3 Kawan Drive	Georgetown, DE	19947	<a href="mailto:runners@ce.net">runners@ce.net</a>	Delaware Wild Lands

Continued.....						
McGowan, Bill	16684 County Seat Highway	Georgetown, DE	19947	<a href="mailto:BillMcg@udel.edu">BillMcg@udel.edu</a>	U of D Extension	
Roca, Ellen	210 Union St.	Milton, DE	19971	<a href="mailto:eroca@tnc.org">eroca@tnc.org</a>	The Nature Conservancy	
Schaffer, Kathy	1201 College Park Drive, Suite 101	Dover, DE	19904	<a href="mailto:Kathy.Schaffer@de.usda.gov">Kathy.Schaffer@de.usda.gov</a>	FSA/USDA	
Seuse, Michael	2320 South DuPont Highway	Dover, DE	19901	<a href="mailto:MSeuse@dda.state.de.us">MSeuse@dda.state.de.us</a>	DE Department of Agriculture	
Short, Austin	2320 South DuPont Highway	Dover, DE	19901	<a href="mailto:Austin.Short@state.de.us">Austin.Short@state.de.us</a>	DE Forest Service	
Stillson, Lester	1203 College Park Drive, Suite 101	Dover, DE	19904	<a href="mailto:lester.stillson@de.usda.gov">lester.stillson@de.usda.gov</a>	NRCS/USDA	
Tarburton, Jack	99 Kings Highway	Dover, DE	19901	<a href="mailto:Jack.Tarburton@state.de.us">Jack.Tarburton@state.de.us</a>	DE Economic Development Office	
Watson, Dee	1065 Duck Creek Road	Smyrna, DE	19977	<a href="mailto:deewatson@starband.net">deewatson@starband.net</a>	Farmer	
Webber, Matthew	3652 Sudlersville Road	Clayton, DE	19938	<a href="mailto:mcwbifarms@aol.com">mcwbifarms@aol.com</a>		
West, Chip	Rt. 3, Box 282	Millsboro, DE	19966	<a href="mailto:wchaswest@msn.com">wchaswest@msn.com</a>	DNMC/Farmer	
Zimmerman, Bob	89 Kings Highway	Dover, DE	19901	<a href="mailto:Robert.Zimmerman@state.de.us">Robert.Zimmerman@state.de.us</a>	DNREC	